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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,350	06/26/2003	Koji Mackawa	1767-116	3653

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EXAMINER

GABLER, PHILIP FRANCIS

ART UNIT	PAPER NUMBER
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3637

DATE MAILED: 02/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/606,350

Applicant(s)

MAEKAWA ET AL.

Examiner

Philip Gabler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoffman (US Patent Number 2872516). Regarding claim 1: Hoffman (Figures 1-4) shows a speaker-provided mounting table (10) with a pedestal (uppermost surface of structure, labeled P), a hollow-shaped support member (supporting understructure, labeled S) for supporting the pedestal (P), the support member (S) also capable of functioning as an acoustic pipe and a speaker unit (44 including speaker housing and internal components) independent of the pedestal being equipped with a speaker (44) and attached to the support member (S). [Note that support member S is the supporting structure of the speaker-provided mounting table, including members 12, 14, 24, 50, 72, 80, etc. but not pedestal P.]

3. Regarding claim 2: Hoffman shows a speaker-provided mounting table (10) according to claim 1, wherein the support member (S) is configured to be capable of functioning as an acoustic pipe with an acoustic capacity (C) associated with an acoustic pipe/support member.

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4. Regarding claim 3: Hoffman shows a speaker-provided mounting table (10) with a pedestal (uppermost surface of structure, labeled P), a hollow-shaped support member (supporting understructure, labeled S) for supporting the pedestal, the support member (S) also capable of functioning as an acoustic capacity, and a speaker unit (44 including speaker housing and internal components) independent of the pedestal being equipped with a speaker (44) and attached to the support member (S).

5. Regarding claim 4: Hoffman shows a mounting table (10) according to claim 1, wherein the speaker unit is composed of a dynamic electricity speaker (44). See column 3 lines 35-37.

6. Regarding claim 9: Hoffman shows a mounting table (10) according to claim 3, wherein the support member (S) has an acoustic capacity (C) to cause a resonance with a vibration mass (48) of the speaker unit (44).

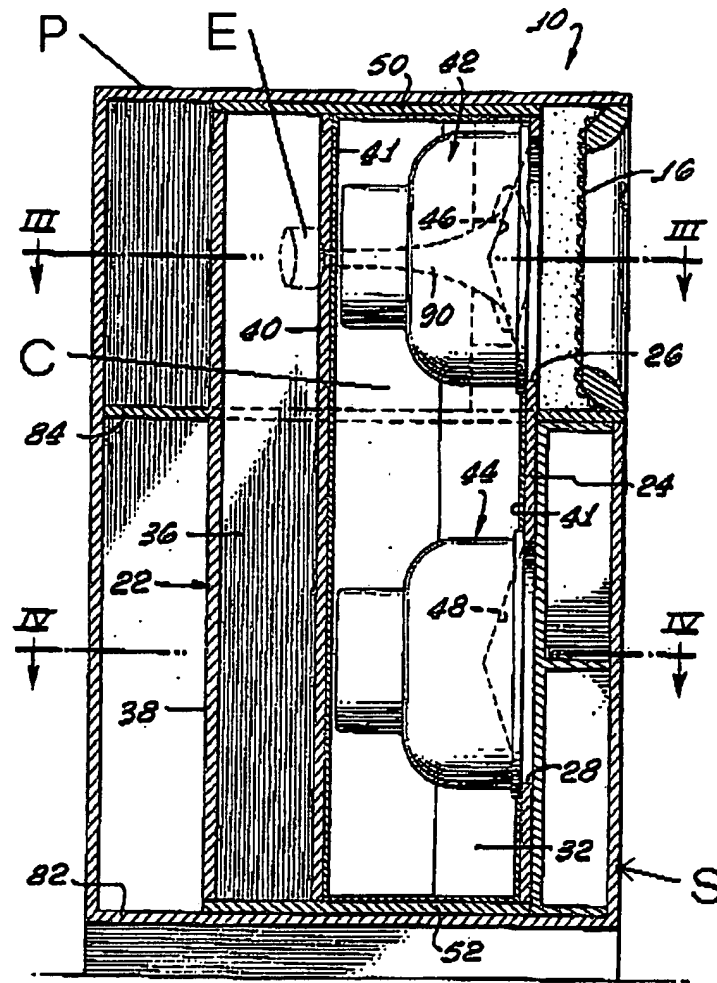
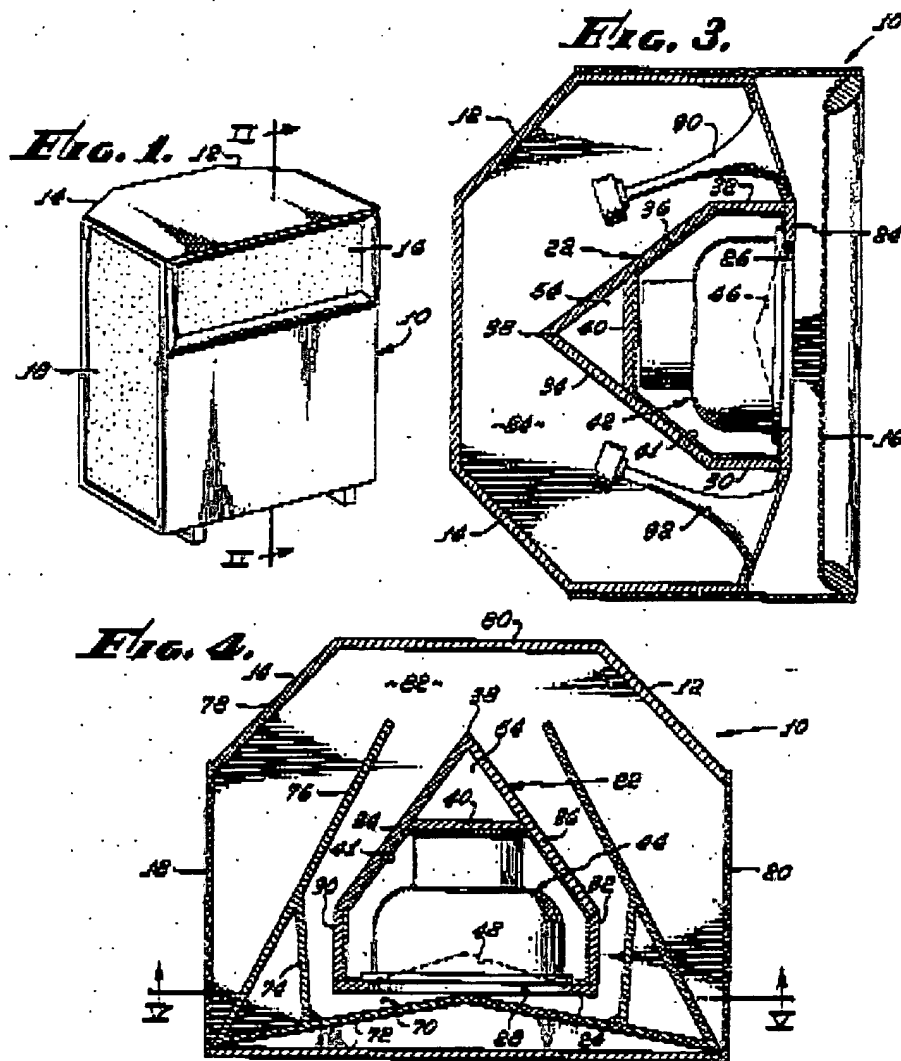


Exhibit 1: Hoffman '516 Figure 2



Hoffman '516 Figures 1, 3, and 4

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoffman. Hoffman discloses a table as recited in claim 1 including electric speakers, but does not specify the use of piezoelectric speakers. The use of piezoelectric speakers however, is well known in the art and they are a common substitute for traditional speakers. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use piezoelectric speakers in place of or in addition to another type of speaker.

9. Claims 6-8, 10-14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoffman in view of Wilke (US Patent Number 5710395).

10. Regarding claim 6: Hoffman shows a mounting table according to claim 1, wherein the support member (S) is provided with an acoustic capacity cavity (cavity containing C), but lacks an aperture port for outputting the sound emitted by the acoustic capacity cavity. Wilke (Figure 7) discloses an enclosure including an aperture port (80) for outputting sound emitted by an acoustic capacity cavity (5). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the aperture port of Wilke with the support member of Hoffman in order output sound emitted by the acoustic capacity cavity.

11. Regarding claim 7: Hoffman shows a mounting table according to claim 1, with a support member (S), structured such that it is capable of causing a pipe resonance therein, but lacking an aperture port for outputting sound generated by the pipe resonance. Wilke discloses an enclosure including an aperture port (80) for outputting sound generated within the enclosure. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine aperture port of Wilke with the support member of Hoffman in order to output sound generated by a pipe resonance.

12. Regarding claim 8: Hoffman shows a mounting table according to claim 2, wherein the support member (S) is provided with an acoustic capacity (C), but lacks an acoustic pipe and an aperture port for outputting sound. Wilke discloses an enclosure including an acoustic pipe (70), capable of allowing a resonance therein, and an aperture port (80) for outputting sound. Accordingly it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the acoustic pipe and aperture port of Wilke with the support member of Hoffman in order to create a pipe resonance and output the sound generated by the pipe resonance.

13. Regarding claim 10: Hoffman, as modified by Wilke, shows a mounting table (10) according to claim 6, wherein the support member (S) is configured to be driven by the speaker unit (44) so that the support member (S) has a function of any one of a Helmholtz resonance, a pipe resonance, or a resonance being caused on both of the speaker and the acoustic capacity (C). [Note that with a port as taught by Wilke, a

Helmholtz resonance is possible with the air (being compressible) in the support member acting as a spring and the air at the port acting as a mass.]

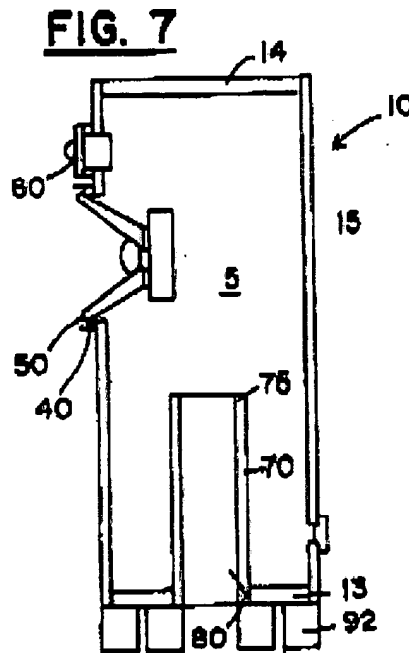
14. Regarding claims 11-13: Hoffman discloses a table as recited in claim 9, and, when modified by Wilke as described above, discloses a table as recited in claim 6. Wilke further discloses a support member (10) formed to have a frequency to cause a (pipe or Helmholtz) resonance, the frequency being set to replay a lower-band sound (see for example column 5 lines 11-12). [Again, note that with a port as taught by Wilke, a Helmholtz resonance is possible with the air (being compressible) in the support member acting as a spring and the air at the port acting as a mass.]

15. Regarding claim 14: Wilke further discloses a distance between a speaker and aperture is determined in agreement with frequency and resonance considerations (see for example column 3 lines 54-56 and column 5 lines 7-12).

16. Regarding claim 16: Hoffman discloses a speaker-provided mounting table (10) with a pedestal (uppermost surface of structure, labeled P), a hollow-shaped support member (supporting understructure, labeled S) for supporting the pedestal (P), and a speaker unit (44 including speaker housing and internal components) independent of the pedestal being equipped with a speaker (44) and attached to the support member (S), wherein the support member (S) is structured to be capable of functioning as an acoustic pipe and an acoustic capacity (C). Hoffman does not disclose a pipe resonance or a Helmholtz resonance resulting in low frequency output. Wilke discloses an enclosure (10) for creating a pipe and Helmholtz resonance resulting in a low frequency output (see for example column 5 line 16-18). Accordingly it would have

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been obvious to one of ordinary skill in the art at the time the invention was made to allow Hoffman's support member to create a pipe and Helmholtz resonance as taught by Wilke to enhance the output sound quality. [Note that with a port as taught by Wilke, a Helmholtz resonance is possible with the air (being compressible) in the support member acting as a spring and the air at the port acting as a mass.]



Wilke '395 Figure 7

Response to Arguments

17. Applicant's arguments, see page 1 paragraph 1 and page 1 paragraph 4, filed 27 December 2005, with respect to the drawing objections and 35 U.S.C §112, first paragraph claim rejections have been fully considered and are persuasive. The

objection to the drawings, as well as the 35 U.S.C §112, first paragraph claim rejections (applied to claims 9 and 12-14), have been withdrawn.

18. The remainder of applicant's arguments filed 27 December 2005, have been fully considered but they are not persuasive.

19. Regarding the acoustic pipe causing a resonance based on the length of the pipe, the argument is not persuasive because this is not supported in the claims or the specification. Hoffman's support member is hollow and capable of functioning as an acoustic pipe as claimed.

20. Regarding the use of the Wilke reference, Wilke does disclose that his tube (70) is integral with a support member (13, 15) that is capable of supporting a pedestal (element 14).

21. The remainder of applicant's arguments have been addressed in the prior art rejections above.

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Smith, Rife, Frankman, Blake, Furukawa, Rumreich, Rerlk, Reed, Taso, Starobin, White, Wang, Domin, Jolmson, Yamashita, Tsao, Shiota, and Howe all show aspects of the claimed invention. The Helmholtz Resonance reference is cited as evidence that such a resonance requires only a container of gas with a port.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip Gabler whose telephone number is (571) 272-

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6038. The examiner can normally be reached on Monday through Friday, 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lanna Mai can be reached on (571) 272-6867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PFG 
2/8/2006

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